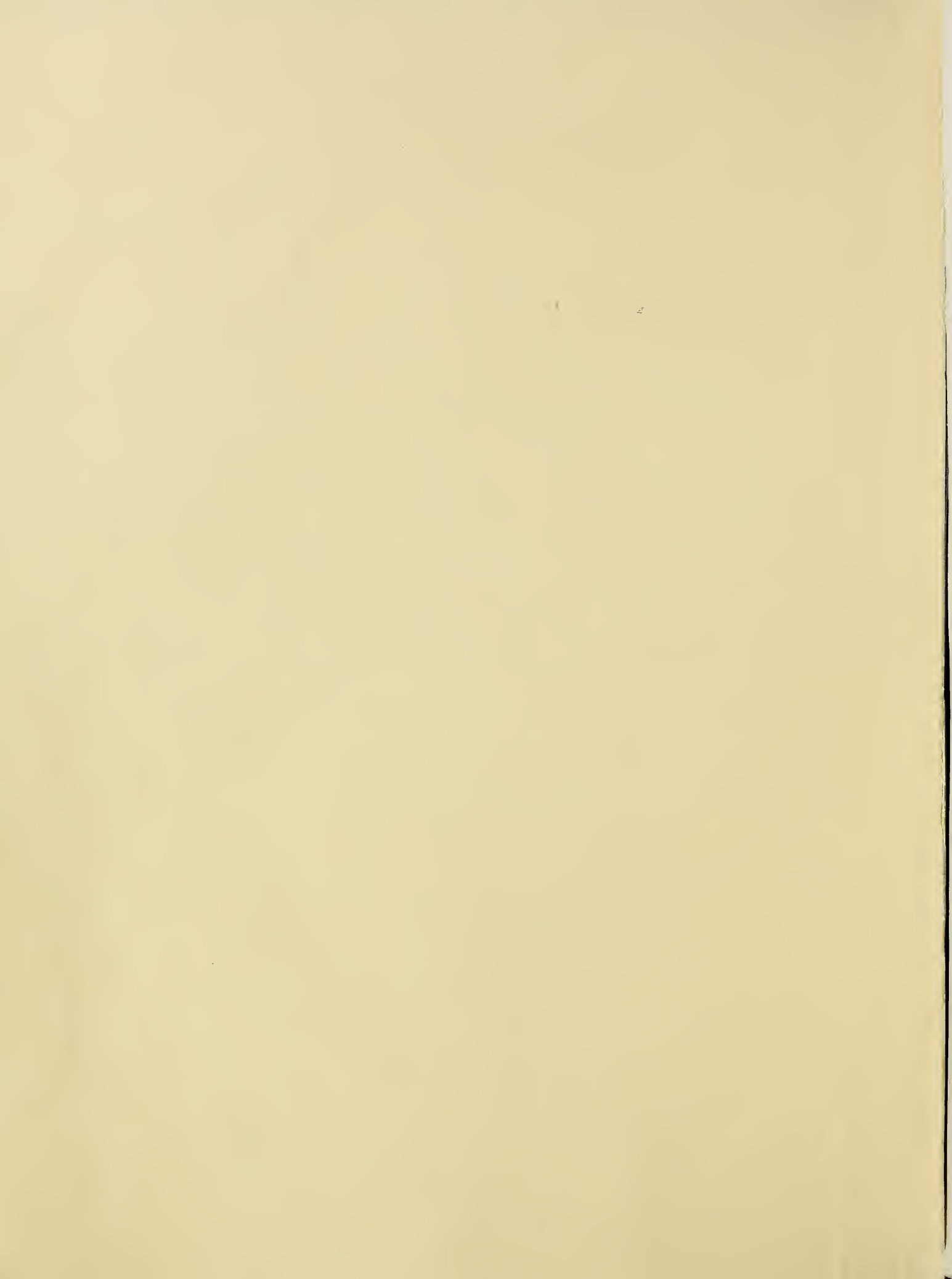


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UNITED STATES DEPARTMENT OF AGRICULTURE  
Rural Electrification Administration  
Technical Standards Committees  
(Electric)

Cap. 2

Supplement No. 3, April 1980, to  
REA Bulletin 43-5  
LIST OF MATERIALS ACCEPTABLE FOR USE ON  
SYSTEMS OF REA ELECTRIFICATION BORROWERS

The attached pages for the "List of Materials Acceptable for Use on Systems of REA Electrification Borrowers" are those which have been revised by action of the Technical Standards Committees during the months of January through March 1980. The following changes should be made in order to keep it up to date. Pages with a colon between are on the same sheet, both being changed.

<u>Add</u> <u>New Page</u>	<u>Remove</u> <u>Page</u>	<u>Add</u> <u>New Page</u>	<u>Remove</u> <u>Page</u>
1-1	1-1	cp	cp
p-2	p-2	cy-1	cy-1
p-3:p-4	p-3:p-4	cy-1.1	cy-1.1
p-5:p-6	p-5:p-6	cy-2	cy-2
p-8	p-8	dh	dh
p-9	p-9	eq(1.1)	eq(1.1)
p-12	p-12	eq(2):eq(2.1)	eq(2):eq(3)
y-1	y-1	eq(3)	-
y-2:y-3	y-2:y-3	eu	eu
z-4	z-4	gb-2	gb-2
ag(Cond.)	ag(Cond.)	sc-1	sc-1
ai-1:ai-2	ai-1:ai-2	sc-2:sc(Cond.)	sc-2:sc(Cond.)
an-3.2	an-3.2	sd	sd
an(3.4)	an(3.4)	se	se
av-1	av-1	sj, sk	sj, sk
av-3	av-3	U gc	U gc
av-5	av-5	U gu	U gu
bn	bn	U gv	U gv
cg-1:cg-2	cg-1:cg-2	U hv-1:U hv-2	U hv-1:U hv-2
cg-3	cg-3	U hw	U hw
cg(3)	cg(3)	U hx	U hx

PROCUREMENT SECTION  
CURRENT SERIAL RECORDS

U.S.D.A.  
NAT'L AGRIC LIBRARY  
RECEIVED



1-1  
April 1980

1 - Clamp, deadend

Copper 2 through 6 CWC 4A through 8A		<u>DISTRIBUTION</u>			
		ACSR			
		4/0 & 3/0	2/0	1/0	2 & 4
-	ALCOA	302**	302**	302**	302**
MD-52-N	Anderson/Sq. D	PG57N**	PG57**	PG-46N**	PG-46N**
-	Bethea/National	DA-20N**	DA-15-N**	DA-15-N**	DA-15-N**
-	Continental	AQD-63**	AQD-52**	AQD-52**	AQD-52**
-	C & R	CR-20-90**	CR-10-90**	CR-10-90**	CR-10-90**
1437	<u>Gould Inc.</u> (ITE)	5011 52101**	4060 1655	4060 2050	4060 2050
2111	Joslyn (Brewer-Titchener)	5011 5210**	2116 -	2116 -	2107* 2115
2111	Knox	5011 5210**	2116 -	2116 -	2107* 2115
-	Lapp	306120N**	306118N**	306118N**	306118N**
80500	Ohio Brass	80442 89237**	78500 86534**	88500 86534**	81500 86534**
-	Reliable	-	-	-	420*

\*Clamp furnished with liner--does not require tape.

\*\*Aluminum clamp--does not require liner or tape.

1-2  
January 1980

1 - Deadend for Steel Strand (Overhead Ground Wire)

TRANSMISSION

For High Strength Steel Strand and Aluminum-Clad Steel Strand

<u>Manufacturer</u>	<u>Clamp Type</u>		
	<u>High Strength Steel</u>	<u>Aluminum-Clad Steel</u>	
	<u>3/8" and 7/16"</u>	<u>7 No. 9 AWG</u>	<u>7 No. 8 AWG    7 No. 7 AWG</u>
Anderson/Sq. D	SWDE-55N		
Ohio Brass	80437		

p - Connectors

Applicable Specification: "REA Specifications for Connectors," DT-8

ACSR to ACSR  
To same size or smaller

	Bare Conductor			
	4/0 - 2/0	1/0	2	4
ALCOA	190	396.6	490.0	490.0
Anderson/Sq. D	LC-53A	LC-51C	LC-51A	LC-51A
Bethea/National	APG-3	APG-2	APG-1	APG-1
Blackburn	PAA12	PAA5	PAA2	PAA2
Burndy	KVS28A	UCG25R	UC25R2R	UC25R2R
Fargo	GA-614	GA-620	GA-620	GA-620
Joslyn	6053	6052	6052	6052
Penn-Union	PCAA-20BF	PCAA-15BF	PCAA-10BF	PCAA-10BF
Reliable	6053	6052	6052	6052
Weaver	NICA12	NICA60	NICA2	NICA2

p - Connectors  
ACSR to ACSR  
To same size or smaller

	<u>3/0</u>	<u>2/0</u>	<u>Over Armor Rods</u> <u>1/0</u>	<u>2</u>	<u>4</u>
ALCOA	200	R196	R196	R196	198
Anderson/Sq. D	LC-83A	LC-52C	LC-52C	LC-52C	LC-52C
Blackburn	-	-	PAA10	PAA10	PAA10
Burndy	-	-	UC32R	UC32R	UC32R
Fargo	GA-9843	GA-9842	GA-616	GA-616	GA-616
Joslyn	-	-	744AL	600AL	600AL
Penn-Union	-	-	ARC-12	ARC-11	ARC-14
Reliable	-	-	744AL	600AL	600AL
Weaver	-	-	NICR60	NICR60	NICR60

	<u>2/0</u>	<u>ACSR to Guy Strand</u> <u>1/0</u>	<u>2 &amp; 4</u>
ALCOA	396.6	396.6	490.0
Anderson/Sq. D	LC-52A-GP	LC-51C-GP	LC-51A-GP
Bethea/National	APG-3	APG-2	APG-2
Blackburn	PAA10	PAA6	PAA5
Burndy	UC28R	UCG25R	UCG25R
Dossert	AC103-LW	AC101-LW	AC100-LW
Fargo	GA-616	GA-620	GA-620
Joslyn	744AL	555AL	438AL
Penn-Union	ALC-15	ALC-10	PCA-010
Reliable	744AL	555AL	438AL
Weaver	NICR60	NICA60	NICA60

p - Connectors

ACSR to Copper or Copperweld-Copper

	ACSR Size (Bare Conductor)				
	3/0	2/0	1/0	2	4
ALCOA	197	R193	R193	195	195
Anderson/Sq. D	LC-811A	LC-811A	LC-522A	LC-511A	LC-511A
Blackburn	PAC7	PAC7	PAC4	2CA	4CA
Fargo	GA-616C	GA-616C	GA-620C	GA-620C	GA-620C
Joslyn	600ALC	555ALC	438ALC	438ALC	438ALC
Reliable	600ALC	555ALC	438ALC	438ALC	438ALC
Weaver	-	-	-	2WCA	2WCA

p-4  
April 1980

p - Connectors

ACSR to Copper or Copperweld-Copper

	ACSR Size (Over Armor Rods)				
	3/0	2/0	1/0	2	4
ALCOA	201	R197	R197	R197	199
Anderson/Sq. D	LC-833	LC-833	LC-811A	LC-811A	LC-811
Blackburn	-	-	PAC 7	PAC 7	PAC 7
Fargo	GA-9843C	GA-9842C	GA-616C	GA-616C	GA-616C
Joslyn	-	-	744ALC	600ALC	600ALC
Reliable	-	-	744ALC	600ALC	600ALC

p - Connectors  
Copper Type Conductors  
Connections to same size or smaller

C'weld Copper Copper	2A Ox7	2x3	4A	6A 4	8A 6
<u>Bare Conductor</u>					
Anderson/Sq. D	DG-1/0	DG-1	DG-2	DG-4	DG-6
Blackburn	1/OH	1H	2H	4H	6H
Burndy	KS-25	KS-23	KS-23	KS-20	KS-17
Dossert	DS-10-F	DS-6-F	DS-6-F	DS-3-F	DS-2-F
Fargo	GC-5020	GC-5002S	GC-5002	GC-5004	GC-5006
Frankel	B-1/0	B-2	B-3	B-4	B-6
Greaves	-	A-8	-	A-5	A-3
Joslyn	-	1F	2F	4F	6F
Kearney	118109	118109	118108	118104	118102
Krueger & Hudepohl	UC58C-EV	-	-	-	-
Penn-Union	S1/0	S2	S3	S4	S6
Reliable	-	1F	2F	4F	6F
Royal Elec. Mfg.	1739	1739	-	-	-
Sherman	TS1/0	TS2ST	TS-2	TS-4	TS-6
Weaver	10W	1W	2W	4W	6W

Over Armor Rods

Anderson/Sq. D	K-5	K-4	K-4	K-2	K-2
Blackburn	2B350	2B350	2B4/0	2B2/0	2B1/0
Burndy	KVS-31	KVS-31	KVS28	KVS26	KVS26
Fargo	GC-5035	GC-5035	GC-5040	GC-5020S	GC-5020
Kearney	118112	118112	118111	118110	118110
Penn-Union	VT-4	VT-3	VT-3	VT-2	VT-1
Weaver	350CX	350CX	4/0CX	2/0CX	1/0CX

p - Connectors  
Copper Type Conductors

	<u>Copper to Guy Strand</u>	<u>Long Connectors Copper to Copper</u>		
		<u>2</u>	<u>4</u>	<u>6</u>
Anderson Elec.	LC-511A	C-2-L	C-4-L	C-6-L
Blackburn	2HPW (1/4") 1/OHPW (3/8") PAC7	2H3	4H3	6H3
Burndy	UC8W26L	KS-22-3	KS-20-3	KS-17-3
C & R	CRJC-1	-	-	-
Dossert	UDV 13-1-P	DS5-3	DS3-3	DS2-3
Fargo	GC-8040P	-	-	-
Greaves	-	A-9	A-6	A-4
Joslyn	438ALC	-	4F	6F
Kearney	9968-1	118107	118105	118103
Krueger & Hudepohl	UC58B-EV	-	-	-
Penn-Union	JC-1-AC (1/4", 3/8" guy strand) (1/0 strand copper max.)	SEL-3	SEL-4	SEL-6
Reliable	438ALC	-	4F	6F
Sherman	R-12	-	TSS-4	TSS-6
Weaver	K-1	2W3	4W3	6W3

p - Connectors, Service

Aluminum-to-Aluminum

Solid or Stranded

	<u>No. 2</u>	<u>No. 4</u>
ALCOA	490.0	490.0
Anderson Elec.	LC-51A	LC-51A
Bethea/National	APG-1	APG-1
Blackburn	PAA2	PAA2
Burndy	UC25R2R	UC25R2R
Fargo	GA-620	GA-620
Joslyn	AL24KK	AL46KK
Penn-Union	PCAA-10BF	PCAA-10BF
Reliable	AL24KK	AL46KK
Weaver	NICA2	NICA2

p-8  
April 1980

p - Connectors, Service

Aluminum-to-Copper

Solid or Stranded

	<u>2 Al to 4 Cu</u>	<u>4 Al to 6 Cu</u>
ALCOA	R193	195
Anderson/Sq. D	LC-511A	LC-511A
Blackburn	PAC345	PAC345
Fargo	GA-620C	GA-620C
Joslyn	AL24UU	AL46UU
Reliable	AL24UU	AL46UU

p - Connectors, Service

Copper-to-Copper

Solid or Stranded

<u>Manufacturer</u>	<u>No. 4</u>	<u>No. 6</u>
Anderson Electric	4E	6ES
Blackburn, ITT	4N	6N
Burndy	KP4C	KP6C
Dante	SE-3	SE-2
Dossert	ES-4	ES-6
Fargo	GC-5004	GC-5006
IlSCO	SX-4	SX-6
Joslyn	R46	R68
Kearney	118118	118117
Krueger & Hudepohl	397A	397A
Penn-Union	SX4	SX6
Reliable	R-46	R-68
Sherman	-	SC6X
Weaver	4SE	6SE

p-10  
July 1979

p - Connectors, Compression

DISTRIBUTION

	<u>Aluminum to aluminum</u>	<u>Aluminum to copper</u>	<u>Copper to copper</u>	<u>Tap connections (Al to Al, Al to Cu)</u>
Alcoa	"Snap-Tap" 210 Series	-	-	-
Anderson/Sq. D	AC Series	AC Series	VCUC	VCP
ITT Blackburn	Type WR	Type WR	Type CF	Type WR
Burndy	"Hycrimp"	"Hycrimp"	"Crimpfit" (Type YC-C)	"Cabelok Crimpfit" (Type YP-U)
Electrical Specialty	"Squeeze Conn" (Type S)	"Squeeze Conn" (Type S)	-	-
Kearney	"Squeezon" (Aluminum)	"Squeezon" (Aluminum)	"Squeezon" (Copper)	"Squeezon" (Aluminum)
Penn-Union	"Press-On" (Aluminum)	"Press-On" (Aluminum)	"Press-On" (Copper)	"Penn-L-Tap"
Somerset/Homac	H Tap-OB&DB	H Tap-OB&DB	-	H Tap-OB&DB

p - Connectors, Compression

SERVICE

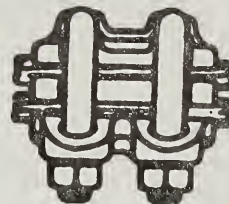
	<u>Aluminum-to-Aluminum</u> <u>Aluminum-to-Copper</u>	<u>Copper-to-Copper</u>
Alcoa	"SECS"	-
Anderson/Sq. D	Versa-Crimp (VCSE)	VCCS
ITT Blackburn	CS, KL	-
Burndy	"Linkits"	YDS-C, YDS-W
Electrical Specialty	VSE	-
Kearney	"Serv-ens"	-
National Tel. Supply	"Nicopress"	-
Penn-Union	"Penn Sleeves"	-
Somerset/Homac	"Shure Splicers"	-

These connectors are furnished in a variety of sizes to fit all combinations of aluminum and copper service wire.

p - Connectors, Transmission

Bolted Type  
ACSR to ACSR  
ACSR to Copper

ALCOA	580 Series
Anderson/Sq. D	LCU-600
Blackburn	2U Series
Burndy (ACSR to ACSR)	UP-A, UP-R



When ordering these clamps specify size, stranding and material of both conductors.

Compression Type  
ACSR to ACSR  
Same size



<u>Conductor Size</u>	<u>ALCOA</u>	<u>Anderson</u>	<u>Burndy</u>	<u>Kearney</u>	<u>ITT Blackburn</u>
1/0	5074.438	VCJS-50R	YCS25R	OHR-1/0-61AJ	RCJ10
2/0	5074.484	VCJS-50R	YCS26R	OHR-2/0-61AJ	RCJ20
3/0	5075.547	VCJS-61R	YCS27R	OHR-3/0-61AJ	RCJ30
4/0	5075.609	VCJS-61R	YCS28R	OHR-4/0-61AJ	RCJ40
266.8 kcmil	5076 Order by	VCJS-80R	YCS30R	HR-266-267AJ	RCJ266M
336.4 kcmil	5076 stranding	VCJS-80R	YCS33R	HR-336-267AJ	RCJ336M

ACSR to Copper

ALCOA	5070 Series
Anderson/Sq. D	VCJS
Burndy	YCR-R-CA
(Order by conductor sizes)	

x - Rod, anchor

Applicable Specifications: Edison Electric Institute  
Specification TD-2, "Specifications  
for Strand Eye Anchor Rods"

Applicable Sizes: Single guy - 5/8 inch diam. 6, 7 and 8 feet long  
- 3/4 inch diam. 8, 9 and 10 feet long  
- 1 inch diam. 9 and 10 feet long

Double guy - 5/8 inch diam. 7 and 8 feet long  
- 3/4 inch diam. 8, 9 and 10 feet long  
- 1 inch diam. 9 and 10 feet long

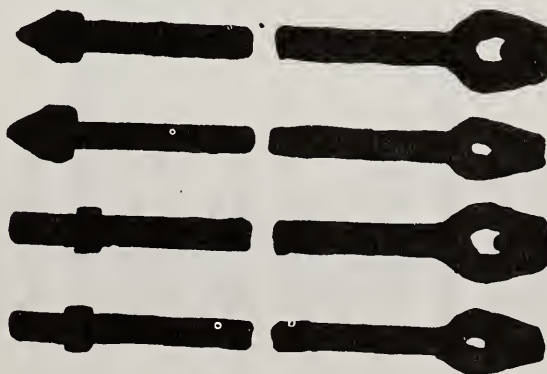
Single Guy Drive - 5/8 inch diam. 7 and 8 feet long  
- 3/4 inch diam. 8, 9 and 10 feet long  
- 1 inch diam. 9 and 10 feet long

Double Guy Drive - 5/8 inch diam. 7 and 8 feet long  
- 3/4 inch diam. 8, 9 and 10 feet long  
- 1 inch diam. 9 and 10 feet long

The following manufacturers have shown compliance with the applicable specifications. Some manufacturers cannot supply all sizes listed above. Check with manufacturer or distributor for availability.

Blackburn  
Chance  
Dixie  
Grip-Tite

Joslyn  
Kortick  
McGraw-Edison  
Utilities Service



y - Galvanized Steel Strand

Applicable Specification: ASTM A475 (Class A, B or C Coating)

DISTRIBUTION GUY STRAND

Grade Size	Siemens Martin		High Strength (HS)			Extra High Strength (EHS)		
	1/4"	3/8"	7/16"	1/4"	9/32"	5/16"	3/8"	7/16"
<u>Manufacturer</u>								
Alcan Cable	X	X	X	X	X	X	X	X
Armco Steel Corp.	X	X	X	X	X	X	X	X
Bethlehem Steel	X	X	X	X	X	X	X	X
CF&I	X	X	X	X	X	X	X	X
Cal-Wire	X	X	X	X	X	X	X	X
Florida Wire and Cable	X	X	X	X	X	X	X	X
Indiana Steel and Wire	X	X	X	X	X	X	X	X
Paulsen Wire Rope Corp.	X	X	X	X	X	X	X	X
Seal Wire Co.	X	X	X	X	X	X	X	X
Southwire	X	X	X	X	X	X	X	X
U. S. Steel	X	X	X	X	X	X	X	X

Note: The buyer should specify Class A, B or C coating per ASTM Specification A475.

y - Galvanized Steel Strand

Applicable Specification: ASTM A475 (Class A, B or C Coating)

TRANSMISSION GUY STRAND

Grade Size	High Strength (HS)			Extra High Strength (EHS)		
	1/4"	9/32"	5/16"	3/8"	7/16"	1"
<u>Manufacturer</u>						
Alcan Cable	X		X	X	X	X
Armco Steel Corp.	X		X	X	X	X
Bethlehem Steel	X		X	X	X	X
CF&I	X		X	X	X	X
Cal-Wire	X	X	X	X	X	X
Florida Wire and Cable	X	X	X	X	X	X
Indiana Steel and Wire	X	X	X	X	X	X
Paulsen Wire Rope Corp.	X		X	X	X	X
Seal Wire Co.	X		X	X	X	X
Southwire	X	X	X	X	X	X
U. S. Steel	X	X	X	X	X	X

Note: The buyer should specify Class A, B or C coating per ASTM Specification A475.

y - Galvanized Steel Strand

Applicable Specification: ASTM A363 (Class A, B or C Coating)

OVERHEAD STATIC WIRE

Grade Size	Manufacturer	High Strength (HS)			Extra High Strength (EHS)		
		3/8"	7/16"	7/16"	5/16"	3/8"	7/16"
	Alcan Cable	X	X			X	X
	Armco Steel Corp.	X	X		X	X	X
	Bethlehem Steel	X	X		X	X	X
	CF&I	X	X			X	X
	Cal-Wire	X	X		X	X	X
	Florida Wire and Cable	X	X		X	X	X
	Indiana Steel and Wire	X	X		X	X	X
	Paulsen Wire Rope Corp.	X	X			X	X
	Seal Wire Co.	X	X			X	X
	Southwire	X	X		X	X	X
	U. S. Steel	X	X		X	X	X

Note: The buyer should specify Class A, B or C coating per ASTM Specification A363.

z - Anchors, Service

Rated Holding Power in Sand - 2500 lb.

	<u>Screw</u>	<u>Expanding</u>
Chance	6346	6870
Dixie	D-6526	-
Grip-Tite	-	322065G
Joslyn	J6526W-CA	J0870-G
McGraw-Edison	DA2N1	-
Power Line Hardware	-	PLHG-70
Utilities Service	C6346-G	PL62-2.5-G

z - Anchors, Swamp

DISTRIBUTION

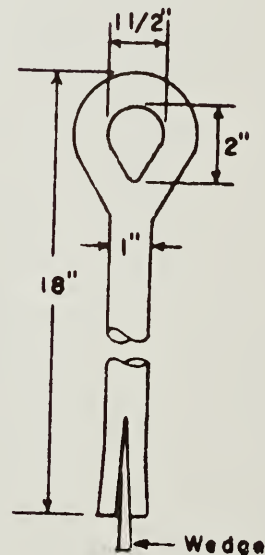
	<u>10" dia.</u>	<u>12" dia.</u>	<u>15" dia.</u>
Chance	10150AS	132AS	152AS
Dixie	D-6710-S	D-6713-S	D-6715-S
Joslyn	J2871SG	J2872SG	J2873SG
Utilities Service	C10150A-G	C122A-G	C152A-G

NOTE: Where galvanized anchors are listed, the same anchors ungalvanized (black asphalt coated) are also acceptable.

z-5  
July 1979

z - Anchors, Rock

	Expanding Rock Anchors			Rock Guy Bolt
Anchor Size - inches	1-3/4	1-3/4	1-3/4	1-3/4
Rod Length - inches	15	30	53	18
Rod Diameter - inches	3/4	3/4	3/4	1
Chance	R315	R330	R353	-
Joslyn	J3436	J3437	J3438	
Kortick	K5503	K5504	K5505	K2377
McGraw-Edison	-	-	-	DA1W1
Utilities Service	CR315	CR330	CR353	5003



z - Pole keys

Chance	P-4817
Joslyn	J-4817
Utilities Service	CP-4817

af - Power Fuses, Substation

<u>Manufacturer</u>	<u>Type</u>	<u>Voltage Rating</u>
Kearney	HX	15
	HX	27
McGraw-Edison	LMO	15
	EMO	15
	HXO	15-46
S & C Electric	XS	15-25
	SMD (Boric acid)	15-138
Southern States	Series P	15-161
Westinghouse	RDB (Boric acid, refillable)	15-34.5
	DBS (Boric acid, non-refillable)	15-34.5
	DBA (Boric acid, refillable)	46-69

NOTE: All fuses listed on this page should be furnished with NEMA standard insulators. The buyer should specify the current rating, voltage rating, interrupting rating and required accessories.

## Conditional List

ag

April 1980

ag - Fuses, Current Limiting, Backup

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Chance</u>		
15 kV Class		
Type K-Mate 25	1084	1. To obtain experience.
Catalog No. C70L-31KA	2/19/76	
25 kV Class		2. Must be used in series
Type K-Mate 25		with external expulsion
Catalog No. C70L-32KA		fuse 25 K or 15 T or
		smaller or with CSP
		transformers 50 kVA or
		smaller.
<u>General Electric</u>		
15 kV Class		
Fuse Model 9F59RBC-25	1094	Same as above.
25 kV Class	7/29/76	
Fuse Model 9F59RBD-25		
<u>McGraw-Edison</u>		
15 kV Class		
No. FAH6H45	1094	Same as above.
25 kV Class	7/29/76	
No. FAH7H45		
<u>Westinghouse</u>		
15 kV Class		
Type CLTX, 25K/15T	1105	Same as above.
25 kV Class	1/6/77	
Type CLTX, 25K/15T		
<u>RTE</u>		
15 kV Class		
Catalog No. 3553025M11	1140	Same as above.
25 kV Class	6/1/78	
Catalog No. 3554025M11		

ai - Rods, Ground

Applicable Size: The standard length is 8 feet and catalog numbers listed below are for this length. Longer rods may be required for special conditions.

Copper-covered ground rods are listed with a 13 mil minimum at any point and a 15 mil average covering of copper. All purchases should specify that a factory certification of the thickness of the copper must accompany the shipment of the rods.

Copper-covered steel rods

	<u>5/8"</u>
Boggs	EB810
Burndy	858-RGR
Calpico	CP588
Carolina Glavanizing	P-588
ITT Blackburn	6258
Joslyn	J8338
Kortick	K5428
Knight	858
Power Line Hardware	PLH-588-C
UTM	858PP
Utilities Service	6617
Weaver	W588
Wilcor	WA588C

Stainless Clad Steel

<u>Manufacturer</u>	<u>5/8"</u>	<u>3/4"</u>
Joslyn	J5374	J5377
Porcelain Products	9438	9448
Teledyne (MEFCO)	"PERMAGROUND"	"PERMAGROUND"

ai-2  
April 1980

Applicable Size: The standard length is 8 feet and catalog numbers listed below are for this length. Longer rods may be required for special conditions.

Hot Dip Galvanized Steel

<u>Manufacturer</u>	<u>5/8"</u>	<u>3/4"</u>
Boggs	G588	G348
	PTG588**	PTG348**
Burndy	G588GR	-
Carolina Galvanizing	R588	R688
Chance	8578	8618
	C203-0107**	C203-0109**
Dixie	D8578	D8618
Galvan	GR6258	GR7508
General Electric	0982-00002	0982-00003
Grip-Tite	GT588	GT348
	GT588PT**	GT348PT**
Joslyn	J3358B*	J3458B*
	J5328	J5338
	J5228**	J5238**
Knight	G-588	G-348
	G-588PT**	G-348PT**
Kortick	K4658	K4678
Lloyd	6258H	7508H
McGraw-Edison	DN588	DN6S8
	DN6D8*	DN7D8*
Porcelain Products	7338	7348
Power Line Hardware	PLH-588-G	PLH-348-G
Utilities Service	5307	6338
Weaver	8480G	8340G
Wilcor	WA8580G	-

Electro-Galvanized Steel

	<u>5/8"</u>	<u>3/4"</u>
Calpico	G8580	-
LMP	6258E**	7508E**

Stainless Steel

	<u>5/8"</u>	<u>3/4"</u>
Joslyn	23821	23822
Teledyne (MEFCO)	TDY Sol	TDY Sol
Wilcor	WA 588-S	WA 348-S

\*Rod furnished with clamp.

\*\*Rod furnished with 4 ft., No. 6 tinned or galvanized copper pigtail.

an - Transformers, Power  
Three-Phase, Step-Down  
for Distribution Substation Use

Primary Voltage-kv	kVA					MVA									
	750	1000	1500	2000	2500	3750	5	7.5	10	12	15	20	25	30	
McGraw-Edison															
34.4															
43.8															
67.0															
115															
138															

Transformers 5 MVA and larger also accepted as load tap changing transformers using McGraw-Edison types 550, 550B and 550C load tap changers.

Transformers 5 MVA and larger also accepted as load tap changing transformers using McGraw-Edison  
Types 550, 550B and 550C load tap changers.

<u>RTE-ASEA</u>														
34.4							X	X	X	X	X	X	X	X
67.0					X		X	X	X	X	X	X	X	X
115							X	X	X	X	X	X	X	X
138							X	X	X	X	X	X	X	X

Transformers 5 MVA and larger also accepted as load tap changing transformers using RTE-ASEA  
Type UZD load tap changers.

<u>Westinghouse</u>														
34.4	X			X	X	X	X		X	X	X		X	
43.8	X			X	X	X	X	X	X	X	X	X	X	
67.0	X			X	X	X	X	X	X	X	X	X	X	
115														
138														

Transformers 5 MVA and larger also accepted as load tap changing transformers using Westinghouse  
Types UTS-A, UTT-B and UVW load tap changers.

Conditional List  
an(1.1)  
July 1979

an - Transformers, Distribution, Pole Type

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Magnetic Electric</u> 7.2/12.5, 7.62/13.2 and 14.4/24.9 kV	1097 9/9/76	To obtain experience.
Conventional, single bushing Self-protected, single bushing Conventional, two bushing	1104 (12/16/76)	
<u>SESCO</u> 7.2/12.5 kV and 7.62/13.2 kV	1018 6/7/73	To obtain experience.
Conventional, single bushing Type RU Self-protected, single bushing Type ESP Conventional, two bushing Type CONV		
Type RU may also be purchased with internal fuse and/or lightning arrester.		
<u>Dowzer</u> 14.4/24.9 kV and Dual Voltage	824 8/19/65	To obtain experience.
Conventional, single bushing Type CR Self-protected, single bushing Type CSP-R Conventional, two bushing Type CD	1011 3/1/73	

an - Transformers, Power  
Three-Phase, Step-Down  
for Distribution Substation Use

Condition of Acceptance: To obtain experience.

Primary Voltage-kV	kVA						MVA							
	750	1000	1500	2000	2500	3750	5	7.5	10	12	15	20	25	30
RTE														
34.4			S	S	X	X								
43.8			X	S	S	X	X							

RTE-ASEA

115 S S S  
138 S S S  
Transformers 5 MVA and larger also accepted as load tap changing transformers using RTE-ASEA  
Type UZD load tap changers.

Sierra (RSE)

34.4 S X S S S  
43.8 X X S S S  
67.0 S X X S S

Transformers 5 MVA and larger also accepted as load tap changing transformers using Westinghouse  
Types UTS-A and UTF-B load tap changers.

an - Transformers, Power  
Three-Phase, Step-Down  
for Distribution Substation Use

Condition of Acceptance: To obtain experience.

Primary Voltage-kV	kVA						MVA							
	750	1000	1500	2000	2500	3750	5	7.5	10	12	15	20	25	30
Standard														
34.4					X	s	X	X	s	s				
43.8					s	X	X	s	X					
67.0					X	X	s	X	X	X	X	s		
115			X					X	X	X	X	X		
138														

Transformers 5 MVA and larger also accepted as load tap changing transformers using Westinghouse Types UTS-A and UTT-B and Siemens-Allis Types TLS and TLH-21 load tap changers.

Uptegraff

34.4	S	S	S	S	S	X	X
43.8	S	S	S	S	S	X	X

Westinghouse

34.4	S				S		S	S	S	S	S	S	S	S
43.8	S									S	S	S	S	S
67.0												S	S	S
115							S						S	S
138							S	S	S				S	S

Transformers 5 MVA and larger also accepted as load tap changing transformers using Westinghouse Types UTS-A, UTT-B and UVW load tap changers.

Conditional List  
at  
July 1979

at - Reflective Guy Marker (Guard)  
8-foot length

Plastic or Fiberglass

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
*Nordic HG-815 yellow	1061 3/20/75	To obtain experience.

\*For use with formed or automatic type deadends for guy strand; will not fit over bolt type guy clamps.

av-1  
April 1980

av - Conductor, ACSR

Applicable Specifications: ASTM Specification B 232-72  
(or latest revision)

Preferred Sizes:	<u>Distribution</u>	<u>Transmission</u>
	4 - 6/1	1/0 - 6/1
	4 - 7/1	2/0 - 6/1
	2 - 6/1	3/0 - 6/1
	2 - 7/1	4/0 - 6/1
	1/0 - 6/1	266.8 kcmil - 26/7
	2/0 - 6/1	336.4 kcmil - 26/7
	3/0 - 6/1	477 kcmil - 26/7
	4/0 - 6/1	556.5 kcmil - 26/7
		795 kcmil - 26/7
		954 kcmil - 54/7

The following manufacturers have shown compliance with the applicable specifications:

Alcan Cable

Aluminum Company of America

American Electrical

Anaconda

Essex (Paranite)

Kaiser

Nehring

Noranda

Pirelli Cable

Reynolds

Southwire

av - Conductor, copper

Applicable Specifications: ASTM Specification B 1-70 (or latest revision) for hard-drawn solid  
ASTM Specification B 3-63 (or latest revision) for soft or annealed solid  
ASTM Specification B 8-72 (or latest revision) for hard-drawn stranded and soft stranded

Preferred Sizes:	Hard-drawn solid	4 and 6
	Soft or annealed solid	4 and 6
	Hard-drawn stranded	2x3, 1/0 x 7, 2/0 x 7
	Soft stranded	4 and 6

The following manufacturers have shown compliance with the applicable specifications:

Alcan Cable

American Electrical

Anaconda

Essex (Paranite)

General Cable

Hatfield (Sizes 4 & 6)

Phelps Dodge

Rome Cable

Southwire

av-3  
April 1980

av - Conductor, Copperweld-copper

Applicable Specification: ASTM Specification B 229-71  
(or latest revision)

Preferred Sizes:	<u>Distribution</u>	<u>Transmission</u>
	8A	1/0 F
	6A	2/0 F
	4A	3/0 F
	2A	4/0 F

The following manufacturers have shown compliance with the applicable specification for the sizes indicated:

Anaconda	(2A and smaller)
Copperweld Steel	(All sizes)
Southwire	(2A and smaller)

av - Conductor, Service  
(Single Conductor)

<u>Manufacturer</u>	<u>Aluminum</u>	<u>Copper</u>
Alcan Cable	x	x
Alcoa	x	
American Electrical	x	x
Anaconda	x	x
Essex (Paranite)	x	x
Kaiser	x	
Phelps Dodge	x	
Pirelli Cable	x	x
Reynolds	x	
Rome Cable	x	x
Southwire	x	x

Applicable Specification: IPCEA-NEMA Standard S-66-524

Insulation: Cross-linked thermosetting polyethylene or equal,  
meeting requirements of Sections 7.3.3 and 7.3.5

Conductor: Physically and electrically equal to MHD copper or  
HD (EC-H19) aluminum, meeting requirements of Section 7.3.2  
(Compact or compressed stranded conductor is acceptable.)

Marking: Manufacturer's name and type of insulation shall be clearly  
shown in durable markings on the surface of the insulation  
at intervals no greater than 24 inches.

av-5  
April 1980

av - Conductor, Service Cable  
(Triplex and Quadruplex)

<u>Manufacturer</u>	<u>Aluminum</u>	<u>Copper</u>
Alcan Cable	x	x
ALCOA	x	
American Electrical	x	x
Anaconda	x	x
Essex (Paranite)	x	x
Hendrix	x	x
Kaiser	x	
Pirelli	x	x
Reynolds	x	
Rome Cable	x	x
Southwire	x	x

Applicable Specifications: REA Specification D-2, Specifications for  
600 Volt Neutral-Supported Secondary Service  
Drop Cables

bk  
July 1979

bk - Guy plate

Applicable Specifications:

Strain Type: Edison Electric Institute Specification TD-11  
1951, "Specifications for Guy Hooks and Guy  
Strain Plates"

Lift Type : None

	Strain Type <u>4" x 8" x 14 gauge</u>	Lift Type <u>2<math>\frac{1}{2}</math>" x 7" x <math>\frac{1}{4}</math>", 2 hole</u>
Chance	6575	7898
Dixie	D6575	D7888
Joslyn	J1034	J7894
Kortick	K4015	K3511
McGraw-Edison	DG1M2	DG4M2
Power Line Hardware	GSP-1	
Utilities Service	5351	C434

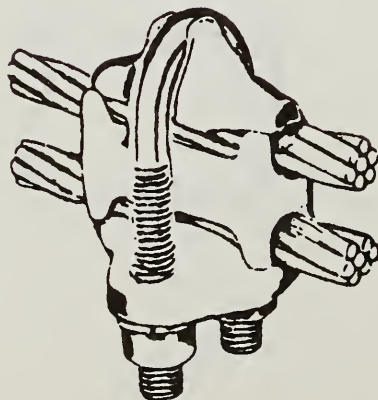


bn  
April 1980

bn - Clamp, loop deadend

For ACSR

	<u>3/0</u>	<u>2/0</u>	<u>1/0</u>	<u>2</u>	<u>4</u>
ALCOA	-	413	413	412	411
Anderson/Sq. D,	LC-74B	LC-71B	LC-70B1	LC-70B	LC-70B
Bethea/National	ALD-7373-U	ALD-34-U	ALD-1313-U	ALD-1313-U	ALD-1313-U
Blackburn	DLC23	DLC60	DLC61	DLC62	DLC62
Burndy	-	-	UW25R	UW2R	UW2R
C & R	-	-	CRLD-10	CRLD-10	CRLD-10
Fargo	GA-145	GA-145	GA-144	GA-144	GA-144
Joslyn	-	-	J1414	J1411	J1411
Weaver	-	-	WDE-10	WDE-2	WDE-2



**cg - Switch, air, three-pole, group-operated**  
**NEMA standard switches for station and line structures**

<u>Manufacturer</u>	<u>Acceptable Mounting on Structure</u>	<u>Titling Ins.</u>		<u>Vertical Break</u>		<u>Side Break</u>		<u>Center Break</u>		<u>Double Break</u>	
		<u>Type</u>	<u>kV</u>	<u>Type</u>	<u>kV</u>	<u>Type</u>	<u>kV</u>	<u>Type</u>	<u>kV</u>	<u>Type</u>	<u>kV</u>
Gould Inc.	Horizontal	3ST	15-34.5	TTR6	15-161						
ITE											
Johnson	Horizontal			VIP	15-230	LS	15-69	M	15-230		
Joslyn	Horizontal			RF-2 (VL)	15-230	RB-1 (VL)	15-25				
(Hi-Voltage)	Horizontal					RB-1*	15-115				
Kearney	Horizontal	NE-2	15-34.5	AR	60-P	15-69					
MEMCO	Horizontal	AgF	15-69	EA	15-345			EE	69-230		
	Horizontal	AgC	15-69								
H. K. Porter	Horizontal			MK-40	15-69	PMB-40A	15-69	LPC	69-230		
(Delta-Star)											
Siemens-Allis	Horizontal			TA(VL)	15-345	SSB	15-138	CCB	115-230		
								CBL-2	115-230		

(L) Means gas or solid material full-load interrupters are accepted and available.

(VL) Means vacuum full-load interrupters are accepted and available.

\* These switches may be purchased with reduced voltage vacuum interrupters and may be applied for loop sectionalizing duty when peak recovery voltage does not exceed 25 kV.

NOTE: Vertical phase-over-phase mounted switches are not acceptable above 25 kV class unless equipped with full-load interrupters. Switches of 15 kV and 25 kV classes with individual phases mounted on wood crossarms or poles must be supplied with insulated interphase and control rods.

cg - Switch, air, three-pole, group-operated  
NEMA standard switches for station and line structures

<u>Manufacturer</u>	<u>Acceptable Mounting on Structures</u>	<u>Tilting Ins.</u>		<u>Vertical Break</u>		<u>Side Break</u>		<u>Center Break</u>		<u>Double Break</u>	
		<u>Type</u>	<u>kV</u>	<u>Type</u>	<u>kV</u>	<u>Type</u>	<u>kV</u>	<u>Type</u>	<u>kV</u>	<u>Type</u>	<u>kV</u>
Powerdyne (Kearney)	Horizontal							V1-V4	34.5-230		
ANIXTER Royal	Phase over Phase Horizontal					RG-63(L)	15-69				
						RSL-L(L)	15-69				
S & C	Horizontal Phase over phase Vertical			Alduti (L) 15-34.5		Alduti (L) 15-25				Alduti (L) 34.5-46	
				Alduti (L) 15-25		Alduti (L) 15-25				Alduti (L) 34.5-46	
				Alduti (L) *15-34.5		Alduti (L) 15-25				Alduti (L) *34.5-46	
Southern States	Horizontal			WAG	15-230	57K	15-69				
Turner	Phase over phase Horizontal					(1D, 2D, 3D)(VL) 15-161					
						1D(VL) 15-161					
USCO	Horizontal Horizontal Phase over phase			AGT(VL)**15-230	GSH-4(VL) 15-138	AGCH**	15-345				
						AGCH-V**34.5-230					
						GSH-4(VL) 15-138	GCH	15-23			

(L) Means gas or solid material full-load interrupters are accepted and available.

(VL) Means vacuum full-load interrupters are accepted and available.

\* These switches, except 34.5 kV Alduti vertical break, are available and accepted in combination with the S & C Type SMD substation fuse cutouts listed on page af-3.

\*\* Also available in bronze in some ratings.

NOTE: Vertical phase-over-phase mounted switches are not acceptable above 25 kV class unless equipped with full-load interrupters. Switches of 15 kV and 25 kV classes with individual phases mounted on wood crossarms or poles must be supplied with insulated interphase and control rods.

cg - Switch, air, three-pole, group-operated

(Not Suitable for Substation Use)

<u>Manufacturer</u>	<u>Acceptable Mounting</u>	<u>Vertical Break Type</u>	<u>Side Break Type</u>	<u>Center Break Type</u>
Chance	Horizontal Phase-over-phase		D2(L)* 15-34.5 D2(L)* 15-34.5	
K-P-F	Horizontal Phase-over-phase Phase-over-phase Phase-over-phase	SV-202 23	A202-A208 15-110 A202 15-23 W202 15-23 MD202 15-23	
Powerdyne (Kearney)	Horizontal Phase-over-phase			A,B,V1 15-23 A,V1 15-23

\*Also available in bronze in some ratings.

(L) Means gas or solid material full-load interrupters are accepted and available.

(VL) Means vacuum full-load interrupters are accepted and available.

MOTE: Phase-over-phase mounted switches are not acceptable above 25 kv class unless equipped with full-load interrupters. Switches of 15 kv and 25 kv classes with individual phases mounted on wood crossarms or poles must be supplied with insulated interphase and control rods.

cg-4  
July 1979

cg - Switch, air, three-pole, group-operated  
(Factory Preassembled)

<u>Manufacturer</u>	<u>Acceptable Mounting on Structures</u>	<u>Vertical Break</u>		<u>Side Break</u>	
		<u>Type</u>	<u>kV</u>	<u>Type</u>	<u>kV</u>
Chance	Horizontal (A)			D4,D5(L)	15-27
	Phase over phase (A)			D4,D5(L)	15-27
S & C	Horizontal (A)			Alduti(L)	15-25
	Vertical (A)			Alduti(L)	15-25
	Phase over phase (B)	Alduti(L)	34.5 (200 kV BIL)#		
	Vertical (B)	Alduti(L)	34.5 (200 kV BIL)#		

(L) Means gas or solid material full-load interrupters are accepted and available.

# Accepted for transmission use only, provided the steel crossarm base is grounded with an adequate grounding connector.

(A) Not suitable for substation use.

(B) NEMA standard switches for station and line structures.

NOTE: Switches with factory-assembled crossarm type bases must have nonconducting crossarm type bases, nonconducting braces, and insulated interphase and control rods, except as otherwise noted.

cg - Switch, Air, Three-Pole, Group-Operated

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>K-P-F</u> Type A202 (L) horizontal-mounted and Types A202 (L), W202 (L) and MD202 (L) phase-over-phase mounted with quick break loadbreak device.	1137 4/20/78	1. To obtain experience. 2. For 15 kV distribution lines only. 3. Insulated interphase and control rods required.

(L) Means full-load interrupter accepted and available.

ci  
July 1979

ci - Clevis, Thimble, Side-Opening

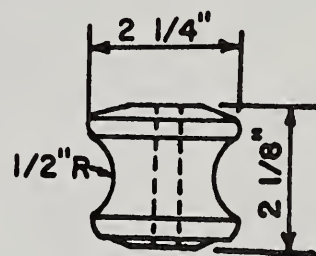
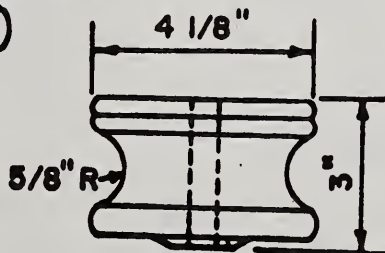
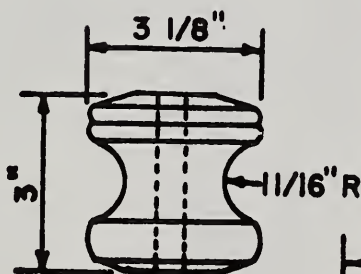
Numbers listed will accommodate: No. 6 thru 2/0 Copper  
No. 8A thru 2A Copperweld-Copper  
No. 4 thru 3/0 ACSR

Gould Inc. (ITE)	2400
Joslyn (Brewer Titchener)	2401
Knox	2401
McGraw-Edison	DM5C1
Ohio Brass	82825

cm  
July 1979

cm - Insulator, Spool

Type:	<u>Secondary (Wet Process)</u>		<u>Service</u>	
			<u>Wet Process</u>	<u>Dry Process</u>
Groove Diameter:	<u>1-3/4"</u>	<u>3"</u>	<u>1-3/8"</u>	<u>1-3/8"</u>
Chance	C909-1032	C909-1034	C909-1031	0606
Hughes	2102	-	-	-
Gould Inc. (ITE)	2012	2026	2011	-
Joslyn	J151	J0101	J150	J100
Kortick	K516	K522	K513	K514
McGraw-Edison	DE4S3	DE5S1	DE2S2	DE2S1
Porcelain Prod. (Knox)	310	306	303W	300D
Universal	1082	-	-	-
Utilities Service	205	31221	208	207



cp  
April 1980

cp - Deadend, Compression Type

ACSR

<u>Conductor Size</u>	<u>Alcoa</u>	<u>AMP</u>	<u>Anderson/Sq. D</u>
1/0	Order by		VCD-50R
2/0	Conductor		thru
3/0	Size and		VCD-61R
4/0	Stranding		"
266.8 kcmil 26/7	2-piece		
336.4 kcmil 26/7	alloy		
477 kcmil 26/7	compression	Type DE (Order	
556.5 kcmil 26/7	"	by Conductor	
795 kcmil 26/7	"	Size and	VCD-835-4RM
954 kcmil 54/7	"	Stranding)	VCD-835-4RM

<u>Conductor Size</u>	<u>Burndy</u>	<u>Fargo(Alcan)</u>	<u>Kearney</u>	<u>Somerset/Homac</u>
1/0	Type Y-W		104000	Order by
2/0	"		thru	Conductor
3/0	"		104000-03	Size and
4/0	"		"	Stranding
266.8 kcmil 26/7	"	SEDA-1109	104000-05	"
336.4 kcmil 26/7	Type YTW	SEDA-1309	thru	"
477 kcmil 26/7	"	SEDA-1809	104000-14	"
556.5 kcmil 26/7	"	SEDA-2209	"	"
795 kcmil 26/7	"	SEDA-3309		
954 kcmil 54/7	"	SEDA-4121		

ACSR  
Adjustable

Somerset/Homac

Order by conductor size and stranding.

Aluminum Alloy  
(6201 and 5005)

Conductor Size:

4 thru 4/0

Anderson/Sq. D

Type VOD, Order by conductor size.

Copper

Conductor Size:

2 x 3

4

6

National Tel. Supply

71-258/3X

71-204-P

71-162-J

Copperweld-Copper

Conductor Size:

6A

8A

National Tel. Supply

71-6A-P

71-8A-P

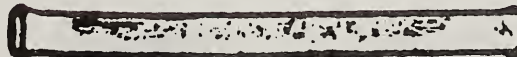
cx  
July 1979

cx - Splice, oval tube

<u>Conductor Size:</u>	<u>4</u>	<u>2</u>	<u>ACSR</u>	<u>1/0</u>	<u>2/0</u>
ALCOA	544	542		540	529

<u>Conductor Size:</u>	<u>0 x 7</u>	<u>2 x 3</u>	<u>Copper</u>	<u>4</u>	<u>6</u>
MEMCO	63	62		58	56
National Tel. Supply	464	463		459	457

<u>Conductor Size:</u>	<u>Copperweld-Copper</u>	<u>6A</u>	<u>8A</u>
MEMCO		170	168
National Tel. Supply		460	459



cy-1  
April 1980

cy - Splice, Compression  
ACSR

<u>Conductor Size</u>	<u>AMP</u>	<u>Alcoa</u>	<u>Anderson/ Sq. D</u>	<u>Burndy</u>
4 6/1		2-piece	VC-36R	"Unisplice"
4 7/1		Order	VC-36R	(1-piece)
2 6/1		by	VC-36R	or Y-S
2 7/1		Conductor	VC-36R	(2-piece)
1/0		Size	VC-50R	Order by
2/0		and	VC-50R	Conductor
3/0		Stranding	VC-61R	Size and
4/0		"	VC-61R	Stranding
266.8 kcmil 26/7		2-piece		2-pc.
336.4 kcmil 26/7		Compression		Type YTS
477 kcmil 26/7	Type SP	Alloy (Order		"
556.5 kcmil 26/7	(Order by	by Conductor		"
795 kcmil 26/7	Conductor Size	Size and	VC-835-4RM	"
954 kcmil 54/7	and Stranding)	Stranding)	VC-835-4RM	"

<u>Conductor Size</u>	<u>Fargo (Alcan)</u>	<u>ITT Blackburn</u>	<u>Kearney</u>
4 6/1		Type RC	OH4-61A
4 7/1		1-piece	OH4-71A
2 6/1		Order	OH2-61A
2 7/1		by	OH2-71A
1/0		Conductor	OH1/0-61A
2/0		Size	OHR2/0-61A
3/0		and	OHR3/0-61A
4/0		Stranding	HR4/0-61A
266.8 kcmil 26/7	TJA-1109	Type DT	HR-266-267A
336.4 kcmil 26/7	TJA-1309	2-piece	HR-336-267A
477 kcmil 26/7	TJA-1809	for	HR-477-267A
556.5 kcmil 26/7	TJA-2209	kcmil sizes	HR-556-267A
795 kcmil 26/7	TJA-3309		
954 kcmil 54/7	TJA-4121		

<u>Conductor Size</u>	<u>Nat. Tel. Supply</u>	<u>Somerset/ Homac</u>
4 6/1	"Nicopress"	"Tension
4 7/1	(1-pc. or 2-pc.)	splicer"
2 6/1	Order by Conduc-	(1-piece or
2 7/1	tor Size and	2-piece)
1/0	Stranding	Order by
2/0	2-pc.	Conductor
3/0	"	Size and
4/0	"	Stranding
266.8 kcmil 26/7	"	2-pc.
336.4 kcmil 26/7	"	"
477 kcmil 26/7	"	"
556.5 kcmil 26/7	"	"
795 kcmil 26/7		
954 kcmil 54/7		

cy-1.1  
April 1980

cy - Splice, Compression

Copper and Copperweld-Copper

<u>Conductor Size</u>	<u>Anderson/ Sq. D.</u>	<u>Burndy</u>	<u>Kearney</u>	<u>Nat. Tel. Supply</u>
6 cu	VCC-28	YDS6W	OH6C	1-162/J
4 cu	VCC-28	YDS4W	OH4C	1-204/P
2 x 3 cu	-	YDS2C-3	OH2-3CX	1-258/3X
0 x 7 cu	-	YDS25	OH1-7C	1-325/7F6
8A CWC	VCC-28	YDS8KT	OHR8ACW	1-8A-P
6A CWC	VCC-28	YDS6KT	OHR6ACW	1-6A-P
4A CWC	VCC-37	YDS4KT	OHR4ACW	1-4A-X
2A CWC	VCC-43	-	-	-

<u>Conductor Size</u>	<u>Reliable</u>	<u>Somerset/ Homac</u>
6 cu	6-J-1	J2C3
4 cu	4-P-1	L2C5
2 x 3 cu	2/3STR-X1	S2C7
0 x 7 cu	-	U2C9
8A CWC	8A-P-1	L2E1
6A CWC	6A-P-1	L2E3
4A CWC	4A-X-1	Q2E5
2A CWC	-	U2E7



cy - Splice, compression  
(one-piece)

(For 6201 and 5005 Aluminum Alloy Conductors)

Conductor  
Size

#4 thru 4/0

Anderson

Type VC-R  
Order  
by  
Conductor  
Size  
and  
Stranding

Burndy

"Unisplice"  
Order  
by  
Conductor  
Size  
and  
Stranding

ITT  
Blackburn

Type RC  
Order  
by  
Conductor  
Size  
and  
Stranding

Conductor  
Size

#4 thru 4/0

Somerset/Homac

"Tension Splicer"  
Order  
by  
Conductor  
Size  
and  
Stranding

Conditional List  
cy  
July 1979

cy - Splice, compression

1-piece splice for ACSR

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
*ALCOA "Jiffy Joint"	704 11/10/60	To obtain experience.

1-piece splice for AWAC

Burndy		
AWAC 4-4/3	1050	To obtain experience.
YDS7M10T	9/19/74	
AWAC 2-4/3		
YDS7M9T		
AWAC 1/0-4/3		
YDS7M7T		

\*Satisfactory for use with 6201 and 5005 all aluminum alloy conductor  
through 4/0 and 19 strand conductors of sizes 26,800 CM and 477,000 CM.

dd  
July 1979

dd - Adapter, Insulator

(For adapting machine bolt to pin insulator thread)

Bolt Size, Inches	$\frac{5}{8}$	$\frac{5}{8}$
Insulator Thread Dia., Inches	<u>1</u>	<u>1-<math>\frac{3}{8}</math></u>

Manufacturer

Chance	4258	-
Joslyn	J2840	J2841
McGraw-Edison	DPLA1	DPLA2

dh  
April 1980

dh - Ground, pole

(For system grounds see ground rods on page ai.)

Manufacturer

Catalog Number

Galvanized Steel Plate With Insulated  
Copper Lead

(For connecting to a copper or aluminum  
ground wire above ground.)

Blackburn  
Joslyn

GP-2  
JO55W

Power Line Hardware  
Weaver

PGP-CL-8  
GSP-1

Galvanized Steel Plate With Connector

(For connecting to a galvanized iron  
ground wire.)

Blackburn  
Joslyn  
McGraw-Edison

GP-2C  
JO55  
DN13ML

Power Line Hardware  
Weaver

PGP-56-C  
GSP-2

Copper Plate

Blackburn  
Joslyn  
Power Line Hardware  
Somerset (Thomas & Betts)  
Weaver

GP-100  
J-9196  
PGPC-56  
5575  
PBH

Conditional List  
eq(1)  
July 1979

eq - Narrow Profile Brackets and Special Arm Assemblies  
(See REA Bulletin 61-12)

METAL BRACKETS

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Flagg (MIF)</u>		
Single post insulator bracket, P542	1032 12/20/73	1. To obtain experience.
Deadend bracket assembly, PAX188A		2. For use only in scenic areas and locations where right-of-way is limited.
Deadend bracket assembly, PAX188M for 14.4/24.9 kV construction	1044 6/27/74	
Standoff bracket, PA619H	1048 8/22/74	3. Not to be used where conductor galloping may be expected.
<u>Joslyn</u>		
Single post insulator brackets 24840.1, for 7.2/12.5 kV construction only 24840.2, for 14.4/24.9 kV construction	1043 6/13/74	(Same as above)
<u>Chance</u>		
Single post insulator brackets C206-0209 for 7.2/12.5 kV construction only C206-0010 for 14.4/24.9 kV construction	1049 9/5/74	(Same as above)
Deadend bracket assembly, C206-0179	1081	
Deadend bracket assembly, C206-0211 for 14.4/24.9 kV construction	1/8/76	
<u>Royston</u>		
Two post insulator bracket RMC-001 for 7.2/12.5 or 14.4/24.9 kV construction	1053 11/14/74	(Same as above)
<u>Continental</u>		
Standoff bracket IACB-18-5 LGE	1065 5/15/75	(Same as above)

Conditional List  
eq(1.1)  
April 1980

eq - Narrow Profile Brackets and Special Arm Assemblies  
(See REA Bulletin 61-12)

METAL BRACKETS

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Lapp</u> Single post insulator bracket, 304031-G	1104 12/16/76	1. To obtain experience.  2. For use only in scenic areas and locations where right-of-way is limited.  3. Not to be used where conductor galloping may be expected.
<u>Western Power Products</u> Single post insulator bracket, HDB-200-R, for 7.2/12.5 kV construction only	1152 12/7/78	Same as above.
<u>Bethea/National</u> Single post insulator bracket, HBF-10-9-GC	1156 2/1/79	Same as above.
<u>Anderson/Sq. D</u> Standoff bracket COB-E-180-TGL	1180 1/31/80	Same as above.

eq - Narrow Profile Brackets and Special Arm Assemblies  
(See REA Bulletin 61-12)

FIBERGLASS REINFORCED PLASTIC

For 12.5/7.2 kV

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Shakespeare</u>		
Two-phase angle bracket 761-36-8	1032 12/20/73	1. To obtain experience.
Two-phase pin bracket 813-36		2. For use only in scenic areas and locations where right-of-way is limited.
Standoff insulator, 560-13		
Standoff insulator, 560-18		
Suspension bracket, 615-18		
Deadend arm, 540-36	1063(4/17/75)	3. Not to be used where conductor galloping may be expected.
Standoff bracket, 892-18	1089(4/29/76)	
		4. Not to be used in con- taminated atmospheres.
<u>Chance</u>		
Two-phase pin bracket C653-0638	1043 6/13/74	Same as above.
Standoff insulator C653-0621		
Deadend arm C653-1023	1049(9/5/74) 1141(6/15/78)	
Two-phase angle bracket C653-1003	1061 3/20/75	
<u>Continental</u>		
Two-phase pin bracket GPB2-568M-36V	1181 2/14/80	Same as above.
Two-phase angle bracket GPB2-568M-36E		
Standoff insulator GPB-58M-13		
Standoff insulator GPB-58M-18		
Deadend arm GDEA-58-3.0-36-2E		
Suspension bracket GPB-58M-18E		

Conditional List  
eq(2.1)  
April 1980

eq - Narrow Profile Brackets and Special Arm Assemblies  
(See REA Bulletin 61-12)

FIBERGLASS REINFORCED PLASTIC

For 24.9/14.4 kV

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Chance</u>		
Two-phase pin bracket C653-0987	1049 9/5/74	1. To obtain experience.
Standoff insulator C653-0988	1141	2. For use only in scenic areas and locations where right-of-way is limited.
Deadend arm, C653-1024	6/15/78	
Two-phase angle bracket C653-1004	1061 3/20/75	3. Not to be used where conductor galloping may be expected.
		4. Not to be used in con- taminated atmospheres.
<u>Shakespeare</u>		
Deadend arm, 540-48	1063(4/17/75)	Same as above.
Standoff insulator, 880-20	1081	
Two-phase pin bracket, 883-48	1/8/76	
Standoff insulator, 870-19	1089	
Two-phase pin bracket, 862-44	4/29/76	
Standoff bracket, 892-18		
<u>Continental</u>		
Two-phase pin bracket GPB2-568M-44-1.375V	1181 2/14/80	Same as above.
Two-phase pin bracket GPB2-558H-48-1.375V		
Standoff insulator GPB-58M-19-1.375V		
Standoff insulator GPB-58H-20-1.375V		
Standoff bracket GIACB-58M-18		
Deadend arm GDEA-58-3.0-48-2E		

eq - Narrow Profile Brackets and Special Arm Assemblies  
(See REA Bulletin 61-12)

WOOD ARM ASSEMBLIES

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Aluma-Form</u>		
Arm assembly, 7.2/12.5 kV XA-3812	1038 4/4/74	1. To obtain experience.
Arm assembly, 14.4/24.9 kV XA-4214		2. For use only in scenic areas and locations where right-of-way is limited.
		3. Not to be used where conductor galloping may be expected.
		4. Not to be used as deadend structures.
<u>Hughes Brothers</u>		
Deadend arm, 2890-J complete with braces and attaching hardware, fittings and bolts	1065 5/15/75	1. To obtain experience.
		2. For use only in scenic areas and locations where right-of-way is limited.
		3. Not to be used where conductor galloping may be expected.



eu - Extension Link  
(Fiberglass)  
(Distribution)

<u>Manufacturer</u>	<u>Strength</u>	<u>Catalog No.</u>
Anderson	10,000 lbs. 15,000 lbs.	*GSB1-9 GSB2-12
Barron Bethea	11,000 lbs. 15,000 lbs.	*BB-11-EE-12 BB-15-EE-12
Continental	11,000 lbs. 15,000 lbs.	*GEE11-12 GEE15-12
Dixie	15,000 lbs.	GIG-15010-TT-R
Flagg (MIF)	11,000 lbs. 15,000 lbs.	*110-12EE 150-12EE
Joslyn-Empire	10,000 lbs. 15,000 lbs.	*400-12 EE 500-12 EE
Plastigage	11,000 lbs. 15,000 lbs.	*HSB-1-12 HSB-2X-12

\*For use with 6" suspension insulators.

Conditional List  
ex  
July 1979

ex - Splice, formed type

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Preformed Line Products</u>		
Splice for ACSR	654	To obtain experience.
FTS full tension splice	10/16/58	For repair only.
Splice for AWAC	999	To obtain experience.
LS-0185 for 4-4/3	8/31/72	For repair only where
LS-0188 for 2-4/3		alumoweld strands are
LS-0191 for 1/0-4/3		not broken.

gb - Meter Sockets

<u>Manufacturer</u>	<u>Type or Catalog Number</u>		<u>No. Jaws</u>	<u>Rating, Amps.</u>
	<u>Ring</u>	<u>Ringless</u>		
Duncan	<u>C#</u>	<u>Overhead</u>		
		CQ#	4, 5, 6	100, 200
		HQ#	4, 5 & 7	200
		HQ-T	4, 5 & 7	200 HD
Durham		<u>Underground</u>	6, 7, 8 & 13	20
		CQ-U#	4, 5 & 7	200
		HQ-U#	4, 5 & 7	200 HD
		R-7000 Series#	4 or 5	100
Dyna-Tech		R-71000 Series#	4 or 5	200
		R-81000 Series#	4 or 5	200
		<u>Overhead</u>		
		1100-C - 1107-C	4 & 5	100
General Electric	<u>R-2#</u> <u>S-1#</u>	1300-C - 1307-C	4 & 5	100
		2100-CH - 2107-CH	4 & 5	200
		2300-CH - 2307-CH	4 & 5	200
		<u>Underground</u>		
		2590-CHU - 2597-CHU	4 & 5	200
		2790-CHU - 2797-CHU	4 & 5	200
		2090-CHU - 2097-CHU	4 & 5	200
		2290-CHU - 2297-CHU	4 & 5	200
		SI-73#	4, 5 & 6	100
		SI-73# for underground	4, 5 & 6	100
General Switch		SV-60#	4, 5 & 6	200
		SI-60#	4, 5 & 6	200
		SI-60	7, 8 & 13	100-200, 20
		42100 Series*	4, 5 & 6	100

\* UL Label  
# Available with UL label

gb - Meter Sockets

<u>Manufacturer</u>	<u>Type or Catalog Number</u> <u>Ring</u>	<u>Rating, Amps.</u>
Kearney/B & C	<u>Ringless</u>	
	WV-100 Series	100
	WVL-100 Series#	100
	WVL-150 Series#	150
	WVEL-200 Series#	200
	WVHQ45-200 Series#	200HD
Milbank	WVHQ78-200 Series#	200HD
	Overhead	
	S7462, 3, 4, 5, 6	100
	U7362*, 3, 4, 5, 6	100
	S7486 Series, R7486 Series*	150
	S7262 Series, U7262 Series*	200 (HD)
Osborn	S7021 Series, U7021 Series*	200 (HD)
	S9550 Series, U9550 Series*	200 (HD)
	S9700 Series, U9700 Series*	200 (HD)
	Underground	
	S8086-XL, U8086-XL*	100
	S8084-XL, U8084-XL*	150
Superior	S7040-XL, U7040-XL*	200
	S9551-XL, U9551-XL*	200 (HD)
	S9701-XL, U9701-XL*	200 (HD)
	ORA-3 Series	150
	ORA-4 Series	200
	URA-4 Series	150
Superior	URA-5 Series	200
	P-501*	100
	414*	200
	314*	

\* UL Label

sb - Switch, disconnect (single-pole, hook-operated  
distribution class)\*

For distribution line use where power class insulation is not required  
and single-phase switching is permissible.

(Not suitable for substation use)

<u>Manufacturer</u>	<u>Type</u>	<u>Voltage Rating</u>	<u>System Voltage Line-to-Line</u>
ANIXTER Royal	BLT(PL)	15 and 23 kV	12.5, 13.2, 24.9 kV
Chance	M3(PL)	15 kV	12.5, 13.2 kV
Gould Inc. (ITE)	DS(PL)	15 and 23 kV	12.5, 13.2, 24.9 kV
Kearney	D-73(PL)	15 and 23 kV	12.5, 13.2, 24.9 kV
McGraw-Edison	D2(PL)	15 and 25 kV	12.5, 13.2, 24.9 kV
Morgan	DHS (PL included in 15 kV)	15 and 23 kV	12.5, 13.2, 24.9 kV
H. K. Porter	EV(PL)	15 kV	12.5 kV
S & C	LBD(PL)	15 and 25 kV	12.5, 13.2, 24.9 kV
Siemens-Allis	HD(PL)	15 and 25 kV	12.5 thru 24.9 kV
Southern States	PD-2	15 and 23 kV	12.5, 13.2, 24.9 kV
	PDJ-2(PL)	15 and 23 kV	12.5, 13.2, 24.9 kV
USCO	HD-H2I(PL)	15 and 27 kV	12.5, 13.2, 24.9 kV

NOTE: Switches on this page must be furnished with four bolts for  
double crossarm mounting.

(L) Means solid material load interrupters are available and accepted.

(PL) Means hooks for portable load interrupters are available.

(LV) Means vacuum interrupters are available and accepted.

\*Steel bases only.

sc-1  
April 1980

sc - Regulators, Voltage  
12.5/7.2 kV  
13.2/7.62 kV

Applicable Specification: REA "Specification for Substation Regulators,"  
S-2

<u>Type</u>	<u>Size</u>	<u>Description</u>
<u>General Electric</u>		
ML-32	19.1 - 509 kVA	(SL) Single phase - step type
MLT	500 - 1000 kVA	(S) Three phase - step type
VML-32	500 - 833 kVA	(S) Single phase - vacuum step type
VMLT-32	1200 - 2800 kVA	(S) Three phase - vacuum step type
<u>McGraw-Edison</u>		
RSAA	19.1 - 500 kVA	(SL) Single phase - step type
RAB	50 amp.	(L) Single phase - step type (Auto-Booster)
<u>Siemens-Allis</u>		
JFR	38.1 - 667 kVA	(SL) Single phase - step type
LFR	50 amp.	(L) Single phase - step type
<u>Westinghouse</u>		
UTS, UTT	167 - 1000 kVA	(S) Three phase - step type

(L) Indicates line use  
(S) Indicates substation use

sc - Regulators, Voltage  
24.9/14.4 kV

<u>Type</u>	<u>Size</u>	<u>Description</u>
<u>General Electric</u>		
ML-32	36 - 576 kVA	(SL) Single phase - step type
VML-32	500 - 833 kVA	(S) Single phase - vacuum step type
VMLT-32	1200 - 4666 kVA	(S) Three phase - vacuum step type
<u>McGraw-Edison</u>		
RSAA	72 - 667 kVA	(SL) Single phase - step type
RAB	50 amp.	(L) Single phase - step type (Auto-Booster)
<u>Siemens-Allis</u>		
JFR	72 - 833	(SL) Single phase - step type

(L) Indicates line use  
(S) Indicates substation use

Conditional List

sc

April 1980

sc - Regulators, Voltage

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Siemens-Allis</u>		
Three-phase, step-type substation regulator Type SFR (13.2/7.62 kV)	657 11/24/58	To obtain experience.
<u>General Electric</u>		
Three-phase, step-type substation regulator Type TMLT-32 (13.2/7.62 kV)	723 9/28/61	To obtain experience.

sd  
April 1980

sd - Current Transformers  
Outdoor Types

<u>Manufacturer</u>	<u>.6 kV</u>	<u>15 kV</u>	<u>25 kV</u>	<u>34.5 kV</u>	<u>69 kV</u>
Associated Engineering	GT HA WEO	BB-15 LG-15	BB-25 LG-25 COF	LG-34.5 COF	
Astra	AA TFW AB AD				
Duncan	DCEW DCCW DCAB				
General Electric	JCR-O JCW-O JAK-O JAD-O	JKW-5	JKW-6 JKW-150 KG-150	JKW-7 JKW-200 KG-200	JKW-350 KG-350
Sangamo	B6 Type	SMC-150			
Westinghouse	CSB-10 CTR CLA-10	CTOM-110 CTOM-15	ACT-150 CCO-150	ACT-200	ACT-350

NOTE: The transformer types listed above are accepted in all standard ratios. Insulation class, voltages, ratios and other necessary information should be specified when ordering.

Conditional List  
sd  
July 1979

sd - Current Transformers  
Outdoor Types

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Electromagnetic Ind.</u>		
Type IK-E, 46-69 kV	971 (7/15/71)	To obtain experience.
Type UMCT, 0.6 kV	981	
Type UCT, 0.6 kV	12/16/71	
Type C03-110, 15 kV	1076	
Type C03-150, 25 kV	10/30/75	
Type C03-200, 34.5 kV		
 <u>General Electric</u>		
Type JCK-5, 15 kV	1059 2/20/75	To obtain experience.

se  
April 1980

se - Voltage Transformers

<u>Outdoor Types</u>						
<u>Manufacturer</u>	<u>.6kV</u>	<u>1.2kV</u>	<u>15kV</u>	<u>25kV</u>	<u>34.5kV</u>	<u>69kV</u>
Associated Engineering	CL TL		PTT-150 SPOF-100 PTT-110	PTT-150 SPOF-150	POF-200	
Duncan	DVE-6 DVF-6					
General Electric	JVA-0 JVP-0		JVW-5 JVW-110	JVW-6 ET-150 JVT-150	JVW-7 ET-200 JVT-200	ET-350 JVT-350
Sangamo	T6A T7		SMP-150			
Westinghouse	EMP PXA-10	EMPL	PTOM-110M PTOM-110	PTOM-150 APT-150	APT-200	APT-350 LPT-350

NOTE: The transformer types listed above are acceptable in all standard ratios. Insulation class, voltages, ratios and other necessary information should be specified when ordering.

Conditional List  
se  
July 1979

se - Voltage transformers

Outdoor Types

<u>Manufacturer</u>	<u>Meeting No. &amp; Date</u>	<u>Conditions</u>
<u>Astra</u>		
Type DB, 0.6 kV	1087	To obtain experience.
Type DA, 0.6 kV	4/1/76	
<u>Electromagnetic Industries</u>		
Type ZOF-E, 46 kV	971	To obtain experience.
Type EOF-E, 46 kV	7/15/71	
Type UT-E, 46-69 kV		
Type PO4-110, 15 kV	1076	
Type PO4-150, 25 kV	10/30/75	
Type PO4-200, 34.5 kV		
Type U-450, 0.6 kV	1080(12/23/75)	

sj  
April 1980

sj - Switches, oil circuit recloser by-pass

<u>Manufacturer</u>	15 kV for Use on <u>12.5/7.2 kV Systems</u>	27 kV for Use on <u>24.9/14.4 kV Systems</u>	Current Rating <u>Amperes</u>
USCO	FRB	FRB	200

sk  
April 1980

sk - Switch, regulator by-pass - disconnect  
For outdoor use

<u>Manufacturer</u>	<u>15 kV for use on 12.5/7.2 kV systems</u>	<u>27 kV for use on 24.9/14.4 kV systems</u>	<u>Current Rating Amperes</u>
Kearney	HB-65	HB-65	600
S & C Electric	XL	XL	600
Siemens-Allis	HR	HR	600
Southern States	BR	BR	400, 600

NOTE: All switches should be furnished with NEMA standard insulators and with 110 kV BIL rating for station use.

U fz-2  
July 1979

U fz - Transformer Connector Block, Insulated

Single Cable Connectors

Manufacturer

Catalog Number

Electrical Spec. Prod

Type SM transformer bushing  
connector kit. (Stud to  
aluminum cables through  
350 kcmil)

NOTE: Additional insulation may be required with some of the above-listed secondary terminal blocks due to the irregularity of mating surfaces between various secondary studs being supplied by the transformer manufacturers.

U gc  
April 1980

U gc - Shield, cable riser

<u>Manufacturer</u>	<u>Dia. (Inches)</u>	<u>Length (Feet)</u>
<u>Galvanized Steel</u>		
Chance	2 - 3 - $3\frac{1}{2}$	5 - 9
*Electrical Materials	2 - 3 - 4 - 5	5
*#Fargo	$2\frac{1}{4}$ - $3\frac{1}{4}$ - 3-3/4 - 5	5 - 8 - 10
*Joslyn	2 - 3 - $3\frac{1}{2}$	5 - 8
*McGraw-Edison	2 - 3 - 4	3 - 5 - 10
Midland-Ross (Kindorf Snapduct)	$2\frac{1}{2}$ - $3\frac{1}{2}$ - 5 (14 ga. galv. steel)	$2\frac{1}{2}$ - 5 - 10
#Utility Products Co.	$3/4$ - $1\frac{1}{4}$ - $2\frac{1}{4}$ - $3\frac{1}{4}$ - 3-3/4	3 - 5 - 8
<u>Plastic and Fiberglass</u>		
*Carlton (plastic)	2 - 3 - 4 - 5	10
*Electrical Materials (plastic)	2 - 3 - 4 - 5	5 - 10
*Hercules (Haskon) (plastic) (Power Mold I, II, III)	2 - 3 - 4 - 5	5 - $9\frac{1}{2}$ - 10
*Joslyn (plastic)	2 - 3 - 4 - 5	5 - 10
*Nordic (fiberglass)	$2\frac{1}{2}$ - $3\frac{1}{2}$ - $5\frac{1}{2}$	5 - 10

(Order by size and length)

#All sizes available with galvanized finish or painted-over galvanizing.

\*All sizes available with back plate.

U gq  
July 1979

U gq - Boot or sleeve, insulated\*

Manufacturer

ITT Blackburn

Catalog Number

MPC9

MPC15

Electrical Materials

100-B (for pad-mounted  
transformer spade  
terminals)

\*Use restricted to 120/208 volt 500 kVA transformers and larger not  
equipped with threaded studs.

U gu  
April 1980

U gu - Pedestal, Power

Refer to Construction Drawings UK5 and UM5-5

Applicable Specifications: "REA Specifications for Secondary Power  
Pedestals," U-6

<u>Manufacturer</u>	<u>Inside Dimensions</u> <u>Inches</u>	<u>Height</u> <u>Inches</u>	<u>Catalog No.</u>
Fargo	8 x 8	38	UP-1520C
	8 x 8	44	UP-1620C
	8 x 12	27	UP-1720C
	8 x 12	44	UP-1820C
	10 x 10	27	UP-2320C
	10 x 10	44	UP-2350C
	10 x 16	37	UP-2520C
Inter-Alloys	7.75 x 11	24	C-24128-PH
	7.75 x 15	24	C-24168-PH
	7.75 x 11.5	24	**PM-24128-PH
	7.75 x 15.5	24	**PM-24168-PH
Nordic	8 x 8	44	PR-50, PR-55
	9 x 14	30	PR-149 (stake) PR-150 (stakeless)
Utility Products	8 x 8	38	UP 8HLP
	8 x 8	46	UP 8HP
	10 $\frac{1}{2}$ x 10 $\frac{1}{2}$	26	UP 10HLP
	16 $\frac{1}{2}$ x 10 $\frac{1}{2}$	36	UP 1016HLP
	10 $\frac{1}{2}$ x 10 $\frac{1}{2}$	42	UP 10HP
Vertex	8 x 14	30	Sp 814
Western Power	8 x 8	30	*SP-8, DF-3 (deadfront)
	9 x 9	30	*SP-9-DF-3
	9 x 9	30	SPM-90, DF-3 (stakeless)
	9 x 14	30	*SP-14-DF-3
	9 x 14	30	SPM-140, DF-3 (stakeless)

\*Furnished with 48" stake

\*\*Pole mounted

U gv  
April 1980

U gv - Stake, Power Pedestal  
Refer to Construction Drawing UK5

<u>Manufacturer</u>	<u>Length Inches</u>	<u>Catalog No.</u>	
		<u>For Power Pedestal Only</u>	<u>For Joint Pedestal</u>
Fargo	42-60-72	UP-530S Series	UP-530J Series
Nordic	48-60-72	PM Series	
Utility Prod.	72-78-84	DM Series	DM Series

U hb - Cable Accessories

(When ordering specify conductor size, type, whether  
copper or aluminum and insulation diameter)

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>ITT Blackburn</u>		
15 kV, used with		To obtain experience.
loadbreak connectors		
Type LB2BA bushing plug		
Type ABOC protective cap	1012 (3/15/73)	
Type JLB2BA bushing plug*		
25 kV, used with non-	1042 (5/30/74)	
loadbreak connectors		
Type LB2CA bushing plug	1110 (3/17/77)	
Type ABOCC protective cap		
<u>Burndy</u>		
15 kV, used with	1019	To obtain experience.
loadbreak connectors	6/21/73	
Type LBP82 bushing plug		
Type LBPC82-11 insulating cap		
<u>Elastimold (ESNA)</u>		
15 kV, used with		To obtain experience.
loadbreak connectors		
Style 1601-CL cable lead	921 (6/26/69)	
Style 1602A3R feedthru insert*	1171	
Style 1601-A3R bushing plug*	9/6/79	
Style 160-DR insulating cap	924 (8/7/69)	
Style 1601CIBA3R	1174 (10/18/79)	
15 kV, used with non-loadbreak		
connectors	921	
Style 1501-A1 bushing plug	6/26/69	
Style 150-DP deadend plug	842	
Style 150-DR deadend receptacle	6/2/66	
25 kV, used with loadbreak		
connectors	964	
Style 2701-A1 bushing plug*	4/8/71	
25 kV, used with non-loadbreak		
connectors	921	
Style K-1501-A1 bushing plug	6/26/69	
Style K-150-DR deadend receptacle	945 (6/11/70)	

\*Note: Asterisk indicates single or three phase. Other bushing plugs for  
use with loadbreak connectors are single phase only.

U hv-1  
April 1980

U hv - Cable, Underground  
15 kV Cable

Applicable Specification: REA Specification U-1  
Conductor : Copper or Aluminum  
                                  #2 AWG through 1000 kcmil  
Insulation : High Molecular Weight (HMW) or cross-  
                                  linked (XL) polyethylene  
Neutral : Copper Concentric Neutral

<u>Manufacturer</u>	<u>Insulation</u>	<u>Flat Strap Neutral Available</u>	<u>Stabilized Neutral Design*</u>
Alcan	HMW or XL	Yes	
Alcoa	HMW or XL	Yes	Ridg-lok
Anaconda	HMW	No	
Collyer	XL	No	
Essex (Paranite)	HMW or XL	Yes	
Hatfield	XL	No	
Hendrix	HMW or XL	No	Neu-Lok
Kaiser	HMW or XL	No	
Okonite	HMW or XL	Yes	
Phelps Dodge	HMW or XL	Yes	
Pirelli	HMW or XL	Yes	
Reynolds	HMW or XL	Yes	Secure-Neutral
Rome Cable	HMW or XL	Yes	Serve-Lock
Southwire	HMW or XL	No,	
Triangle	HMW or XL	Yes	

\*Accepted design meeting the requirements of 7.5.2 REA Specification U-1,  
for a minimum neutral with a maximum lay.

U hv-2  
April 1980

U hv - Cable, Underground  
25 kV cable

Applicable Specification: REA Specification U-1  
Conductor : Copper or Aluminum  
No. 2 AWG through 1000 kcmil  
Insulation : High Molecular Weight (HMW) or cross-  
linked (XL) polyethylene  
Neutral : Copper concentric neutral

<u>Manufacturer</u>	<u>Insulation</u>	<u>Flat Strap Neutral Available</u>	<u>Stabilized Neutral Design*</u>
Alcan	HMW or XL	Yes	
Alcoa	HMW or XL	Yes	Ridg-Lok
Anaconda	HMW	No	
Essex (Paranite)	HMW or XL	Yes	
Hendirx	HMW or XL	No	Neu-Lok
Kaiser	HMW or XL	No	
Okonite	HMW or XL	Yes	
Phelps Dodge	HWM or XL	Yes	
Pirelli	HMW or XL	Yes	
Reynolds	HMW or XL	Yes	Secure-Neutral
Rome Cable	HMW or XL	Yes	Serve-Lock
Southwire	XL	No	
Triangle	XL	Yes	

\*Accepted design meeting the requirements of 7.5.2 REA Specification U-1  
for a minimum neutral with a maximum lay.

## Conditional List

U hv(1)

October 1979

U hv - Cable, Underground  
(15 or 25 kV cable)TREE RETARDANT

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Reynolds</u> Reynotree HMW	1114(5/12/77)	To obtain experience.
	1134(3/2/78)	
DFDA-6202 HMW	1151(11/16/78)	
<u>Alcoa</u> DFDA-6202 HMW	1148(9/28/78)	To obtain experience.
<u>Rome Cable</u> Treban 100 HMW	1146(8/31/78)	To obtain experience.
DFDA-6202 HMW	1155(1/18/79)	
<u>Essex</u> Treban 100 HMW	1146(8/31/78)	To obtain experience.
<u>Southwire</u> Treban 100 HMW	1146(8/31/78)	To obtain experience.
DFDA-6202 HMW	1152(12/7/78)	
<u>Triangle</u> Treban 100 HMW	1146(8/31/78)	To obtain experience.
DFDA-6202 HMW	1151(11/16/78)	
<u>Hendrix</u> DFDA-6202 HMW	1151(11/16/78)	To obtain experience.
<u>Pirelli</u> Treban 100 HMW	1152(12/7/78)	To obtain experience.
DFDA-6202 HMW	1152(12/7/78)	
<u>Alcan</u> DFDA-6202 HMW	1167(7/12/79)	To obtain experience.

U hw - Warning sign

Applicable Specifications: REA Drawings UML2-1 and UML2-2

<u>Manufacturer</u>	<u>Size (inches)</u>	<u>Danger Sign Catalog No.</u>	<u>Caution Sign Catalog No.</u>
Brady*	7 x 10	46133	46043
	10 x 14	46131	46041
Dun-Lap*	7 x 10	DL-D710	DL-C710
	10 x 14	DL-D1014	DL-C1014
	14 x 20	DL-D1420	DL-C1420
	20 x 28	DL-D2028	DL-C2028
Eastern Metal*	7 x 10	REA 12-1-710	REA 12-2-710
	10 x 14	REA 12-1-1014	REA 12-2-1014
	14 x 20	REA 12-1-1420	REA 12-2-1420
	20 x 28	REA 12-1-2028	REA 12-2-2028
Lyle*	7 x 10	UML2-1-710	UML2-2-710
	10 x 14	UML2-1-1014	UML2-2-1014
	14 x 20	UML2-1-1420	UML2-2-1420
	20 x 28	UML2-1-2028	UML2-2-2028
May Advertising	7 x 10	MY710C	MY710B
	10 x 14	MY1014C	MY1014B
	14 x 20	MY1420C	MY1420B
	20 x 28	MY2028C	MY2028B
For pressure sensitive decal add "D" prefix to catalog number.			
Truck Sign Service*	7 x 10	TSD-710	TSC-710
	10 x 14	TSD-1014	TSC-1014
	14 x 20	TSD-1420	TSC-1420
	20 x 28	TSD-2028	TSC-2028

\*Reflective signs also available.

The signs listed on this page are to be secured to equipment and transformer enclosures by means of an adhesive or by welding. Screws and rivets are not to be used.

U hx  
April 1980

U hx - Cable Route Marker

Manufacturer

Catalog No.

Surface Mounted

Chance

C554-0001

Fargo

GM354

Above Grade

Chance

C554-0183

Dun-Lap

DL-R45  
DL-R712

Lyle

UM12-712

May Advertising

MY45A  
MY712A

For pressure sensitive decal add "D" prefix to catalog number.

Truck Sign Service

BCW-712

Conditional List

U hy(1)

July 1979

U hy - Splice, Underground, Permanent

(When ordering specify conductor size, type, whether  
copper or aluminum and insulation diameter)

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>AMP</u>		
"Ampact Splice" (35 kV)	1126(11/3/77)	To obtain experience.
<u>Burndy</u>		
Type PMS162-K (15 kV)	981(12/16/71)	To obtain experience.
<u>Elastimold (ESNA)</u>		
Style 1500S, straight splice, through #1/0 (15 kV)	1135 3/23/78	To obtain experience.
Style 25-S, straight splice, #2/0 through #4/0 (15 kV)	1135(3/23/78) 873 7/27/67	
Style 25-Y, Y-splice (15 kV)	921 6/26/69	
Style K-25-S, straight splice (25 kV)		
Style K-25-Y, Y-splice (25 kV)		
Style M-250-S, straight splice (35 kV)	1134 3/2/78	
<u>General Electric</u>		
"Uni-Matic" (15 & 25 kV) (max. cable size 2/0)	977 10/14/71	To obtain experience.
<u>ITT Blackburn</u>		
Type S4B (15 kV)	1160	To obtain experience.
Type S4C (25 kV)	3/29/79	
<u>3M</u>		
"Quick-Splice"		
5400 Series (15 kV)	969(6/17/71)	To obtain experience.
(#2 AWG thru 750 kcmil)	1024(8/30/73)	
5420 Series (25 kV)	1032(12/20/73)	